STATEWIDE DROUGHT PLAN UNDER DEVELOPMENT

By Thomas Sands, P.E.

ROUGHT CONDITIONS EXIST THROUGHOUT MOST OF ARIZONA. Precipitation in six of the last seven years has been significantly below normal. In many areas of the state, surface-water flows, reservoir levels, and well-water-pumping levels are at some of their lowest ever recorded. Conditions are the most severe in rural areas, in part due to a heavy dependence on groundwater and a lack of alternative supplies. Municipal water providers in Flagstaff, Williams, Mayer, Pine, Strawberry, and in areas near Sierra Vista, Sonoita, and Picacho have suffered from some potable water shortages within the past year. On the other hand, the metropolitan areas of Phoenix and Tucson have not yet been significantly affected primarily because of the availability of surface-water supplies from the Central Arizona Project and the Salt River Project.



However, even these water supplies are in danger of being reduced significantly if the drought continues for a few more years.

GOVERNOR'S DROUGHT TASK FORCE

Earlier this year, in response to the State's worsening water supply conditions, Governor Napolitano signed Executive Order 2003-12. The order established the Governor's Drought Task Force (GDTF) to oversee the implementation of a statewide drought plan and directed the Arizona Department of Water Resources (ADWR) to lead the effort. The GDTF is comprised of representatives from 12 state agencies, plus the Arizona Corporation Commission, the Office of the Governor, and Senate and House of Representatives. The membership was limited to state representatives because they will be responsible for overseeing the implementation and response processes.

The Executive Order also called for the following drought-related activities:

- Preparation of a short-term **Potable Water Plan**. This plan addresses the state's immediate water needs for this summer (2003). It was developed and adopted by the GDTF in July, focusing on three basic elements: Monitoring, Assessment, and Response. The Monitoring element calls for a team of state and federal agencies led by Emergency Management to constantly monitor Arizona's water supply situation and issue monthly reports. The Assessment element identifies and discusses several Arizona water providers that face drought-related potable water delivery challenges this summer and provides information to assist all water providers in determining their own drought risk. The Response discussion includes a variety of water supply and demand responses, and encourages early preparedness to mitigate drought-related impacts. The complete Potable Water Plan can be viewed by visiting the GDTF Web site referenced at the end of this article.
- Development of the long-term, comprehensive **Arizona Drought Plan**. This will be the centerpiece of the GDTF's drought planning products and is targeted to be complete by mid-2004. It will contain a statewide strategy for preparing for and responding to long-term droughts, linking current drought response capabilities (including drought plans of individual water providers) to expanded programs within specified areas. The Plan will address a variety of drought-sensitive water uses within Arizona including municipal and industrial, range management and livestock, wildlife and wildlife habitat, tribal water supplies, and commerce and tourism. The Plan will include specified activities/responsibilities and triggers for monitoring, assessment, response, and adaptation. When completed, it will require an ongoing commitment from participating agencies, stakeholders, and the public to manage droughts in an orderly and practical manner. To address and analyze the various user components within the long-range plan, several topic-specific work groups will be formed. To date, the following groups have been proposed:
 - Irrigated Agricultural Work Group
 - Municipal and Industrial Water Supply Work Group
 - Environmental Health, Watershed Management, Livestock and Wildlife Work Group
 - Tribal Governments Work Group
 - Commerce, Recreation, and Tourism Work Group
- Development of a **Conservation Strategy.** The Strategy will, at a minimum, consist of the following components: water education, technology transfer, assistance, an information clearinghouse, and Web site development. Individual work groups will be formed for each component to identify key issues, desired outcomes and recommen-dations for implementation. Program updates will be posted on the Drought Task Force Web site noted at the end of this article. The goal of this effort is the development and implementation of a water conservation strategy that emphasizes education for sound water habits, which will result in a stronger conservation ethic.

LOOKING AHEAD

The GDTF has been meeting regularly since May 2003. With the completion of the short-term Potable Water Plan, efforts have now shifted to development of the long-term plan and the Conservation Strategy. Both of these efforts include workshops to discuss and solicit feedback on the proposed plans. These workshops will afford opportunities for individuals to provide input to the plan development process and to voice concerns regarding drought impacts on their businesses, livelihoods, and communities.

Another part of the planning process will be the development of virtual drought planning capability, taking advantage of Web-based information technologies. Through this Web site, task force members and the public could have ready access to the most up-to-date information available about drought conditions, the most recent climate and weather forecasts, and other pertinent information. Users will also have access to guidelines regarding appropriate interpretation and use of the information provided. This latter feature is essential, since information (particularly forecasts) can vary substantially over time and space in terms of skill, accuracy, and



relevance. Some of the information may be provided in interactive forms, allowing users to tailor the results to fit their needs.

Some of the iterations in developing the plan are expected to be accomplished through Web-based review and communications. This will allow more individuals in the rural areas to provide meaningful input. Since there is a very large group of stakeholders who have indicated an interest in participating, (more than 400 people are currently on the ADWR's GDTF mailing list), adminis-tration of multiple meetings of interest groups could become overwhelming, given the limited resources available to support the process and the mandated time frame to complete the plans.

SUMMARY

The State of Arizona has committed to developing a comprehensive drought plan that will use the lessons learned by other states, along with enhancements that can be used by water providers within Arizona. This effort will differ from the drought plans in other states in that it will include a focus on adaptation and reduction in vulnerability to future droughts. It is anticipated that stakeholder input will help shape the research, monitoring, and communication processes and encourage new types of relationships between agencies, researchers, and stakeholders. In addition, the plan will focus on a monitoring, assessment, and response process that will continue to improve and adapt as conditions change and as better drought information becomes available.

For more information, please see the GDTF website at http://www.water.az.gov/gdtf or phone the GDTF administrative staff at (602) 417-2447.